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AUTHOR Field, Dorothy
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ABSTRACT

Psychologists generally agree on the importance of early events in personality development, yet until now there has not been an opportunity to look at the personal lives of a group of adults over a considerable time. Subjects examined were 16 men and 44 women, parents of the subjects of the Guidance Study, a longitudinal study of the Institute of Human Development, Berkeley. At three time periods, 1929-1931, 1945-1947, and 1968-1969, there were interviews of these parents, whose mean age was 68.8 at the last interview. Twenty-four "factual" and 24 "attitudinal" variables are examined. Information ranging from questions about education, occupation and place of birth, to relationship and bond with spouse, parents and children, which was reported two or more times, is included. It was found that some parents are more consistent reporters. Factual variables were recalled with more consistency than attitudinal variables. Analysis of the ratings of happiness of the parent's childhood found that a continually and significantly increasing number reported themselves as having had a happy childhood. Reports were no more and no less consistent for the periods when the parents were younger or when time periods were shorter. A "sag" in the perceptions of the parents was found when their children were 17 years old. Parents' reports during this period were less optimistic than they were either before or after. (Author/BMW)

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Retrospective Reports by Healthy Intelligent Elderly People of Personal Events of their Adult Lives

Dorothy Field

University of California, San Francisco

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This paper reports some very preliminary results of a study of information gathered between 1929 and 1969 on a group of adults, parents of the subjects of the Guidance Study, one of the longitudinal studies of the Institute of Human Development, University of California, Berkeley.

Yarrow, Campbell & Burton (1970) wrote a cogent introduction to their monograph, Recollections of Childhood, that described reasons for inquiring into the veridical quality of retrospective reports. They pointed out that the field of personality development has relied heavily upon anamnestic data for its evidence. Retrospective reports have provided much of the substance in studies concerned with the role of early experience, childrearing, and parental functioning in personality development. Yet we know very little about how much can be observed by a participant observer, the recollector/informant himself, or how much can be retained, or how it will be reported. Similarly, considerable faith has necessarily been placed in data collected from old people through recollections and reminiscence, and theories of aging have relied heavily on information obtained in this way.

Yet, as Clausen (1974) pointed out, "since the past is almost inevitably revised in retrospective reconstructions to accord with present perspectives, the cloak of evidence is an insubstantial fabric. Longitudinal studies or personal documents maintained over long periods of time afford the only adequate bases for tracing the linkage by which change comes about in the life course" (p. xviii).

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Only a very few studies have been able to examine the veridical nature of retrospective reports. Most of these have been concerned with the reports of mothers of events in the early lives of their children, and original records have been primarily in the form of hospital and health records. The earliest of these studies was published in 1935 by Pyles, Stolz & Macfarlane, and the mothers studied were the mothers of Guidance Study subjects. Some of these same women are sources of the data to be reported here. Pyles, et al, compared medical and developmental data that had been systematically gathered at birtn and during the child's first year with the mothers' recall of these events when the child was 21 months old. They found that the mothers were reasonably accurate in their reports of some information. For example, "birthweight" was reported accurately by 59%, and "duration of gestation" was reported accurately by 89%. "Weight at one year," however, was reported accurately by less than 10% of the total sample and by only 35% of the mothers who attempted to recall at all. Some responses tended to err in the direction of precocity, for instance, "age walked alone" and "age first tooth appeared." In addition, a tendency was found for mothers to forget some of the difficulties of raising young children.

In the National Survey of Health and Development, a longitudinal study of 5000 people born in Great Britain in March of 1946 (Douglas & Blomfield, 1956), mothers' recollections of health-related events were tested. Recollection of hospital stays of their children varied in accuracy depending upon the intensity of impact on the mother, for example. These reports did not vary in accuracy between mothers of more and fewer children.

Some Norwegian studies (Brekstad, 1966; Haggard, Brekstad & Skard, 1960) interviewed women before the birth of the child and when the children were six months and six years or seven to eight years old. They found consider-

able inaccuracy, which was expected, but also considerable variation between different kinds of recollections. "Hard facts," such as weight and length of baby at birth were remembered very accurately, with correlations of .71 to .89; general wishes and attitudes, such as hoped-for sex of the child and whether the pregnancy was planned, were intermediate; high anxiety items such as concern for the child's normality and the ease of childbirth, were least likely to be recalled accurately. In addition, women who were rated as anxious were less likely to recall with accuracy.

Others, e.g., Mednick & Schaffer (1963), examined the direction of the discrepancies in the mothers' reports and found that recollections turned in the direction of the "best" outcome. For instance, breast feeding was recalled as continuing longer, and the children were remembered as walking earlier and being toilet trained earlier. Wenar & Coulter (1962) interviewed 25 women three to six years after they brought their children to a therapeutic nursery school. The accuracy found, in which 57% of the answers were classified as "Same" at both time periods, is higher than that of most studies. Most "factual" items were recollected with considerable consistency, 75% to 96%. All of these, however, had been retrospective at the time of the initial interview. Wenar & Coulter found no tendency to recall early events as less distressing or more pleasant as time passes. They suggested that reliability is to a great extent a function of the affective content of the question and the emotional state, particularly in terms of anxiety, of the mother.

Block (1969) collected reports from mothers of their earlier childrearing practices approximately 5 years later and compared these reports with observations that had been made earlier. She found that some mothers were more accurate than others in their recollections. Accurate and inaccurate mothers could be distinguished by certain personality variables, as de-

termined by Q sorts.

Another British study, part of the National Children's Bureau Longitudinal Study of children born in March, 1958 (Fogelman, 1978), found that parents were likely to report more moves, that is, changes of housing, at the seven-year follow-up than they did at the eleven-year. Reports of numbers of schools attended by the children, however, was much less discrepantly reported. Also, contacts with the police were significantly underreported in comparison with national statistics. It is likely, of course, that the latter incidents were not forgotten but simply not reported.

Moving on to studies of recollections of adults of events in their own childhoods, another study of the Guidance Study members by Livson & McNeill (1962) found considerable accuracy of recall, $r = .75$, of age of menarche by women when asked at age 30. A tendency was found among the women to report a whole-year figure, whereas the original information had been much more precisely recorded. Livson & McNeill suggested that if the women had been instructed to be as precise as possible in their reports, the correlations would have been considerably higher.

Rosenthal (1963), studying members of the Oakland Growth Study, another IHD longitudinal group, compared a number of variables measured at age 16 and recalled 20 years later. She found that retrospective responses of the males correlated more highly with adolescent scores than did those of the females. For both sexes, parental relations were less correctly recalled than other variables.

Weishaus (1978) studied the women subjects of the Guidance Study and their relationships with their aging mothers. These women were asked to recall the overall quality of this relationship during childhood at two follow-up interviews, when they were 30 and again when they were 40. It was found

that the correlations of later reports with actual childhood scores on "hostile/friendly," "satisfaction with mother," and "strain/easy relationship" was quite low for the most part, with correlations ranging from -.34 to +.57. However, the correlation between recollected childhood relationship and the actual present relationship of the adult women was quite high: r = .75 when the women were aged 30 and r = .81 when they were 40.

Cherry & Rodgers (1978), looking at reports of subjects of the National Survey of Health and Development in Britain on questions asked when the subjects were between 18 and 28 years old, found that inaccuracy is not simply (if at all) a function of time but rather of experience of the respondent. For instance, their subjects were asked to report on training taken after leaving school. They found that men who had taken as much as a year's apprenticeship in a skilled trade were not likely to remember having done so if they subsequently entered another field of work, such as policeman, whereas those men who continued to work at the trade reported the earlier apprenticeship with greater regularity. Cherry & Rodgers also told of the results of asking a simpler question: the height each person reported at ages 20 and 26 when, presumably, they were fully grown. They found that these reports were often discrepant and showed a sex bias as well: women were more likely to have "shrunk" in the six years (27.5%), at least in reported height, and men more likely to have "grown" (31%).

Yarrow, Campbell & Burton's (1970) study is the most comprehensive of the studies of recollection. They examined mothers' reports, over differing intervals of time, of their children at preschool age. Their findings were congruent with others reported above. But they also interviewed the children, three to thirty years after the nursery school experience. Thus, they could compare both the children's and mothers' recollections of the same

events. These recollections were not always similar; mothers' reports tended to be closer to the original nursery school records than those of the children, but directional divergencies were similar. The greater time intervals seemed to have some effect on mothers' recall but not on that of the children.

Woodruff & Birren (1972) found that a group of USC alumni, retested at about age 45 on a personality test they originally took as undergraduates, produced scores very similar to the originals. On the other hand, when asked to mark this personality test as they believed they had done 25 years earlier, the retrospective scores were considerably lower than was in fact true. Among several interpretations, Woodruff & Birren suggested that the subjects may have been responding stereotypically. That is, unknowingly they may have been describing their children's personalities more than their own at the same age, for the retrospective scores were rather close to those of a sample of current USC students.

Lyons & Dickinson (1973) assessed the validity of retrospective reports of changes in job satisfaction in a group of nurses with a three-year longitudinal design. On two occasions nurses were questioned about job satisfaction and about communication and coordination within the hospital, and on the second occasion they were asked to rate the changes that had occurred in the past three years in these areas. Lyons & Dickinson concluded that retrospective measures are not accurate enough to be considered as substitutes for true longitudinal methods.

A new longitudinal study of twins, sponsored by the Kaiser Foundation Research Institute (1979), is now examing reports of twins of personal events from earlier years. Although the "facts" from the earlier period are not available to these researchers, they can compare the responses of the twin pairs to identical questions. Preliminary findings are in line with those of other studies: 40% of the twin pairs gave differing answers to an inquiry

about their father's education, for example.

Regarding recollections of events in later adult life, very few studies exist. Two investigated memory for public events. Squire (1974) questioned medical inpatients aged 50 to 89 and residents of a retirement community aged 60 to 89, about public events which had occurred in the preceding four decades. He found a steady small decline in memory for all age groups. No evidence for selective preservation of more remote events on the part of the oldest persons was found.

Warrington & Sanders (1971) reported very similar results for their sample of normal adult persons ranging in age from 40 to 80. For all ages, performance declined rather rapidly for events of the preceding eight years and remained relatively stable for earlier events. The older people were less good at recall than the younger, with significant differences found between people in their 70s and 60s, and also those in their 60s and 50s. Warrington and Sanders also tested memory for well-known faces. Results were quite similar, except that there was a sharper dropping off for all age groups of memory for faces in the first six to eight years. Again, no evidence was found for selective preservation of more remote events by the older people.

Reminiscence in older persons has been studied considerably more. For example, Butler (1963) and Lewis (1973) showed that reminiscence, or life review, is an important aspect of coming to terms with one's own life. Lieberman & Falk (1971) found that old people who were in a stressful situation (waiting to enter a nursing home) engaged in more reminiscence than did two other groups of old people: those who were community residents not anticipating any relocation and those who had been residents of homes for the aged for at least three years and retained good psychological and physical status.

But these studies were not concerned with the veridical nature of the

reminiscences. Linn (1973) examined the reports of happiness of their childhoods of 100 older men. She found that men who were judged to have current psychological dysfunctions were significantly more likely to have reported unhappy childhoods. Linn noted that it was not possible for her to ascertain the truth of these reports; nevertheless, a number of theories of personality would take this as evidence that unhappy childhoods lead to psychological problems in old age.

In spite of the obvious importance of the question, no studies were found which examined the accuracy of reports by elderly persons of personal events occurring earlier in their own lives.

In summary, most previous assessments of the veridical quality of retrospective reports have been concerned with reports of mothers about their children, and the objective materials with which these reports were concerned came from hospital and health records or nursery school records. A few examined the reports of young adults who were subjects of longitudinal studies. Very few studies have been able to compare recollections of old people with earlier events, and these studies examined memory for public events. All the studies have in common findings of considerable distortion in memory over time. "Factual" information is recollected with more accuracy than "attitudinal" information. Many studies found a directional shift as well, for the information was recalled as "better": the baby walked and talked earlier, the mother nursed him longer, the child was more outgoing in nursery school, the men were taller, or the financial situation had not been as difficult as it had appeared earlier.

In view of the burgeoning of interest in aging and the fact that most research will of necessity be cross-sectional, it is crucial to determine the interpretability of retrospective reports from cross-sectional samples.

Are the anamnestic materials regarding earlier adulthood gathered from old persons subject to the same systematic distortions found in reports of childhood? Are some earlier stages of adult life remembered more accurately than others? Are some old people more veridical in their overall reports, and if so, what are the characteristics by which these groups can be distinguished? For the investigation of these questions, the longitudinal materials of the Institute of Human Development are uniquely suited.

One of the most valuable characteristics of the materials to be examined here is the opportunity we have to look at intelligent, healthy, normal people at three different periods of their adult lives. Information was gathered at intervals of approximately 16 and 23 years. The parents were growing older through this time, and many experiences shaped their perceptions of themselves, their families, and their past lives. What part will these experiences have played in the retrospective reports which can be examined here?

Subjects

The subjects of the study number 60: 16 men and 44 women. They are the parents of the subjects of the Guidance Study, began by Jean W. Macfarlane in 1928 and continuing to this day (see, for example, Macfarlane, 1936; Jones, Bayley, Macfarlane & Honzik, 1971). The Guidance Study originally was a sample of every third baby born in Berkeley in 1928 and 1929, so the parents were a random selection of the population of Berkeley who had children during those years.

The 60 parents of this study are all the parents on whom data at all three time periods is complete. Their ages at the time of 40-year follow-up in 1968-69 ranged from 59 to 77 for the women, with a mean of 67.9, and 63 to 80 for the men, with a mean of 71.2. Their education ranged across

the Hollingshead scale: six had professional degrees and three had less than six years of education. The mean was midway between high school graduate and some college. The occupation of the men, or the husbands of the women, before retirement represented all the categories of the Hollingshead scale: there were 14 professional or high executive people and two unskilled laborers. The mean occupational level was approximately Category 3, Administrative personnel, small independent business owners, and minor professionals. They are among the most committed of the parents, as evidenced by their willingness to be repeatedly interviewed and tested, so they are indeed a special group. As in all longitudinal studies, attrition was to some extent selective. Compared with other GS parents, the group showed a slight but not significant trend for these parents to have experienced less financial strain, either when their children entered the study or when they were 17. A trend toward higher SES at both those times was significant ($p < .005$, $p < .02$) for the women but not for the men. Similarly, higher education was observed for both sexes, but was significantly higher only for the women ($p < .003$). The occupations of the men ($p < .001$) or the husbands of the women ($p < .02$) were also higher than occupations of other GS parents. The average IQ of these parents, taken at average age 68.8 was 119 (range 81 - 150). Scores were not available for younger ages, so the participants and nonparticipants cannot be compared.

Method

Raw materials consist of information gathered from these parents at three times: Early (E), when their children entered the Guidance Study in 1928 and 1929 and during the year or two that followed; Seventeen (S), an intensive interview taken when their children were 17 years old, in 1945

to 1947; and Forty (F), an intensive interview averaging about four hours (Maas & Kuypers, 1977) and Wechsler Adult Intelligence Scale, when their children were 40, in 1968 and 1969.

For the Early time (21 months to three years), I had access to already coded information. This included demographic, socioeconomic status, family relationship ratings, and personality ratings of the parents, made by Macfarlane and others at that time. In addition, information about each parent's own childhood and family of origin was gathered at the time of entry into the study; this material, but only this material, was retrospective at the time of original collection. The 40-year and 17-year interviews were treated very similarly. The 40-year had been taped, and verbatim transcripts were the source of the ratings. In 1946, however, notes had been taken by the interviewers and dictated afterwards. These transcriptions constitute a "filter," but the nature of the questions coded should minimize any associated problems.

Two of the four raters coded 72% of the interviews at each time period. Agreement between these raters was 81% for the 40-year and 82% for the 17-year. Situations in which one rater made a rating and the other felt that there was not enough information to make a judgment were counted as disagreements here. All differences in ratings were resolved in conference. Some investigators are wary of conference agreements because of the possibility that one rater may exert undue influence over the other but we divided up our duties, and each of us conferred with all others about equally. In addition, all raters felt well satisfied that they were neither unduly influenced or influencing.

The ratings were "blind" as well. That is, no rater under any circumstances rated the same parent at both time periods, and no rater rated both

a husband and a wife at the same time period.

Inter-rater reliabilities were calculated for each of the interviews and are shown in Table 1. Remember that all these differences were subsequently resolved in conference for the 72% of the interviews which were double-rated, so it is only the reliabilities of the remaining 28% that are at issue. A few variables yielded considerably less rater concordance. Only one of these, "bond with mother," was unreliable in both interviews. Because of its theoretical importance, however, and because the results it yielded appear to be in agreement with the many other variables, it has been retained in this report, but remember that "bond with mother" is suspect. Other variables noted in Table 1 also account for considerable instances of disagreement. "Change of health" was discarded, but the others were retained because of their probable theoretical importance.

Interrater agreement obtained is quite good for the field, working with the sorts of materials we had, and all differences were reconciled to final agreement. It was necessary to be as precise as possible, because the focus of this study is on the accuracy of reports by our subjects, and it behooved the raters to do their share toward maintaining accuracy.

One hundred forty variables were rated in the 40-year interview. This interview formed the basis of the work by Maas & Kuypers (1977), but the variables in this study are for the most part different from those they studied. Some of their ratings will be used in future analyses, including Q sorts, ego ratings, IQ, Life Satisfaction ratings, and life-style clusters. In the 17-year interview 158 variables were rated. In all cases, information was gathered which was felt to be directly comparable to information available at one or more of the other time periods, or which would be valuable in distinguishing parents who turned out to be "good" or "not so good" remem-

berers. In all there are about 450 variables for the 3 time periods; not all will be reported in this study.

As is the case with all such studies, not all information was available on every parent at every time. In this case, the problem is exacerbated by the nature of the study as it was originally set up. More information was collected on children in the Guidance group than those in the Control group. A number of the early ratings simply were not made on the Control parents, so the information we have for 27 of our subjects is not as full as that for the other 33 in the Early time period. Guidance and Control parents were treated alike, however, in the 17-year and 40-year follow-ups.

The Present Investigation

I have taken for this study only those variables on which completely comparable information is available for two or three time periods.

There are "factual" variables and "attitudinal," or affect-laden, variables. However, I should make it clear that I am at no time really dealing with absolute facts: I have no birth, wedding, or death certificates, for instance. I am really looking for consistency, for agreement over the time periods. Remember that these are only the variables which duplicate information; therefore, no information about the parents at the time of the 40-year follow-up is included. Many other interesting variables, particularly some ratings of family relationships and personality ratings, were made at all three time periods, but changes in these probably reflect true changes in the parents' situations. These will be the subject of the later reports. In addition, because our rating requirements were so strict, when there was insufficient information to make a rating it went uncoded. Even if a rating were made with every confidence at Time 1, if that variable were not rated at Time 2 for a parent we were not able to make the necessary comparison,

and that information was lost.

Each of the "factual" and "attitudinal" variables are listed in Tables 2 and 3.* Men and women were examined separately. Although Lowenthal, Thurnher, Chiriboga, et al (1974) found consistent sex differences in all four of their age groups, as yet I have found few statistically significant differences between men and women. In part, this finding results from the nature of the data, and comparisons will be made for the sexes separately. There were few differences in the way men and women furnished information. Women answered more questions than men, but not significantly so. Men were slightly more consistent in the factual realm, but not significantly so, and there was no difference at all in attitudinal answers.

These data were analyzed in several ways. Following the lead of Yarrow, Campbell & Burton (1970), measures of association and measures of correspondence were made on each variable. Correlation coefficients were used as measures of association to compare each time period with every other for each variable. For all variables where a four or five point rating scale had been used a Pearson r was calculated. For a few of the factual variables the phi coefficient or Cramer's V was appropriate. For some of the factual variables, such as birthplace, responses at the two time periods could only be judged as in agreement or not in agreement. No correlations were computed in cases where only small numbers of subjects could be compared. The direction of change was coded as "up" when the second report was in the more "desirable" direction relative to the first. It must be emphasized that we are not talking about actual change over time, as for instance in the relationship between parent and child, but rather about the parent's second report of the same relationship of the earlier time.

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* A few copies of Table 2 and 3, expanded to include means, directions of change, percent agreements, and statistical analyses are available from the author.

Measures of correspondence were percents of consistency between two time periods, the number of agreed responses divided by all responses given. These could be computed for all variables save those with very small Ns.

A further measure is an index of change, McNemar's significance of shift (Siegel, 1956, p. 63-67). This measure was applied to all the variables in which direction of change could be computed. Variables in which change occurred in only small numbers were examined with the binomial test (Siegel, 1956, p. 36-42).

In addition, because many of the variables had been present in all three time periods, a multivariate repeated measures analysis of variance was computed in which changes over time were examined. This is shown in Figures 1 and 2.

Results

The Veridical Nature of Retrospective Reports

Some parents were much more consistent reporters than others on all the variables coded at both the 17-year and 40-year interviews. Comparing the percent of questions answered consistently out of all questions actually answered at the three time periods, the range of consistency on the factual variables was 48% to 96%; the mean percent consistency for all parents on the factual questions was 73%. For the attitudinal variables, as anticipated, the number of consistent recollections was lower: 22% to 100%, and the mean percent correct for all attitudinal questions answered at both time periods was only 47%. The one 100% correct score illustrates a problem of analysis of this sort of data: a man answered only six of the 38 possible comparisons, but his recollections were all consistent between the two time periods.

Comparisons of groups and of individual people will be made in a future paper. Here the emphasis is on the variable themselves, for I think it will be of more general interest to this audience to know where they can count on their informants, if at all, and where it is that retrospective reports are most likely to be suspect.

However, all parents' total percent of consistency scores, including both factual and attitudinal variables, were compared with several other scores of interest. The Pearson correlation between IQ scores of the WAIS given at the 40-year follow-up and the consistency scores was only .26 ($p < .05$). However, when the correlation was between the WAIS scores and the consistency scores on the factual items only, the r increased to a respectable $r = .42$ ($p < .005$). The correlation between age of parent and consistency score was $r = -.18$ (NS), indicating a slight tendency for the older parents to be somewhat lower in self-agreement.

Factual Variables

Some variables are much more consistently recalled than others, even within the "factual" realm. It has been suggested that the saliency of the variable to the individual will cause this difference, and, of course, some variables will be much more salient than others for almost all of the parents. One variable which seems to be salient to all these parents whose children had been under study at the Institute of Human Development for nearly forty years is the number of children they have! This, and the report of the number of boy children and the number of girl children, are the only variables on which agreement was perfect.

Some factual variables were reported with greater concordance by both men and women at all times. The "parent's position" in his own family was quite consistent (83%) as was the report of other data about family of origin,

such as "what was the church in which you were raised?" (85%), whether the parents of our own subjects had separated (98%), and birthplace of the parent's mother, father, and parent herself (74%, 87%, and 81%), but not the spouse (48%). And, as noted earlier, all parents were 100% accurate in their reports of their number of children and the number of each sex.

Among the factual variables, the only questions that showed a statistically significant direction of shift were those dealing with age of marriage. At the later time periods, age at marriage was systematically reported as younger for women, whether the female parent was reporting her own age at marriage or the male was reporting the age of his wife. The women were more likely to report their husbands as older at marriage than they actually were.

Attitudinal Variables

It is harder to compare men and women on the attitudinal questions, for in many instances the small number of comparisons available for the men made analysis meaningless. The highest agreements among the women were for the questions about "change of relationship with mother" (82%), "change of relationship with father" (62%), "marital adjustment of her own parents" (71.3%), and the "intellectual quality of her childhood family" (56.3%). None of these questions were answered by enough of the men to be computed. Bearing in mind the small Ns involved, it appears that the women were somewhat more consistent in their assessments of the "relationship with their fathers" (women, 41%; men, 26.5%), as well as "bond with mothers" (women, 27.7%; men, 25%) and "bond with fathers" (women, 34.3%; men, 18.5%). Women were somewhat less consistent on "relationship with their mothers" (women, 32.7%; men, 42%).

The happiness of childhood question led to above average concordance

for the men (59.5%) but not for the women (44.5%). This difference reaches significance, t (10) = 2.26, $p < .05$.

For some variables there was little apparent change in the way the group reported, yet there was considerable difference in the amount of change by individuals. For instance, two variables which appear to have changed very little over time are "marital adjustment of the parent and spouse at E" (means 3.16 at E and 2.7 at S for the women, and 3.0 and 2.0 for the men) and "intellectual climate of the parent's home in childhood" (means of 3.09 at E, 3.60 at S, and 4.0 at F for the women and 3.17, 4.0, and 2.75 for the men). Yet the former shows considerable shifts between time periods: only 2% of the parents reported the same circumstances over time, 25% changed their ratings by two points in either direction on the 5-point scale and 8% rated their earlier adjustment with spouse as three points worse the second time they were asked. On the other hand, for the question of intellectual climate in the childhood home, 58% of the ratings were the same over two time periods, and only 6% deviated by more than one point of the five-point scale.

The recollections of the parents to the questions stretching back to the most distant era, those concerning the family of origin and their childhoods, were compared with questions concerning more recent times. The men showed a higher percent of agreement for the family of origin questions which concerned the most distant times (mean 68.4% for factual and 38.6% for attitudinal variables) than for other questions (mean 67.7% for factual and 29.5% for attitudinal). Women were similar: agreements on family of origin recollections were 66.7% for factual and 42.8% for attitudinal; for all other questions the agreements were 71.7% for factual and 41% for attitudinal. None of these differences was significant. Recollections were not

more faulty for events in the more distant past. It is possible, of course, that they were agreeing with their own earlier recollections of their childhoods, because our original information about these childhoods was retrospective when the Guidance Study began, rather than with the objective "facts" of that childhood.

Did You Raise Your Children as You Were Raised?

One result that surprised me was the answers to the question "Did you raise your children in the same way that you were raised?" We scored this on a 4-point scale: 1 = "generally the same"; 2 = "the same allowing for differences in times or circumstances"; 3 = "more differences than similarities"; and 4 = "quite differently." There was very little consistency in the parents' answers to this question at the 17-year and 40-year interviews. Only 18% of the parents agreed with their own previous assessments. Even when the question was dichotomized, and only two responses of 1 = "more same," or 2 = "more different" were scored, only 19 parents answered the same way at both time periods.

Another interesting difference between the 17 and 40 interviews occurred in the spontaneous information which the parents could provide after they answered the question "Did you raise your children in the same way that you were raised?" Often the parents went on to supply unsolicited but interesting examples of particular ways in which their upbringing was alike or different from that of their children. These comments generally fell into three categories which were coded "independence," "opportunity," and "Golden Rule." I found that the parents were very much more likely to offer these comments at the 17-year interview than at the later 40-year, in spite of the fact that the conditions of the later interview were much more conducive to this sort of reminiscence. This seems to be an example of saliency, that is, how close

to their hearts was the whole subject of childrearing when they themselves were nearly 70 years old and their children were 40. Table 4 shows that these spontaneous examples were six times more likely to be given at the 17-year interview than at the 40-year.

"Happiness of Childhood"

One of the most interesting findings is the responses of these parents to the question about the happiness of their own childhoods, a part of the interviews at each of the three time periods. Table 5 shows that a larger proportion of parents reported that their own childhoods were happy at each time they were asked. The first three columns of the table are compiled from the ratings based on clinical interviews; the fourth is the response given by each parent to a questionnaire mailed out to these parents in 1973 (Elder, 1979). Probably the big jump in happiness recollected at the 1973 period is a result of the different way the data were collected at that time. Note that a considerable number failed to answer that question on the questionnaire; perhaps those are the ones who might have indicated a less happy childhood if they had been asked in a different way. Nevertheless, there is a steady increase in those who assessed childhood as a happy time. Perhaps distance lends an aura of satisfactoriness to these memories.

Because it seemed possible that the parents who had not answered this question at one or more of the four periods were different from parents who had, the responses of those thirty people who answered at all four periods were examined. Table 6 shows that this smaller group is very much in agreement with the full sample, and this very interesting finding holds up. The last graph of Figure 2 shows the "happiness of childhood" variable. The repeated measures analysis of variance shows a highly significant change over time ($p < .0002$). Of those thirty people, seven were judged at all four periods to have had a "generally happy" childhood, and one was judged at all

four times to have had a "generally unhappy" childhood. All others showed changes in their ratings.

An exploration of this finding and the changes in these people which led to their taking a more benevolent view of their own childhoods with increasing age or distance is a matter of the first priority in the future. In the meantime, it is clear that the changes in early recollections exhibited by these people render suspect any theories of personality which suggest that psychological dysfunction in old age is the result of an unhappy childhood, at least if the only report of this childhood is, as is usually the case, that which is given by the already dysfunctioning older person.

An Examination of the Different Time Periods

The third row of Tables 5 and 6 shows another sort of change occurring over time as well. A disproportionate number of parents reported "generally unhappy" childhoods at the time their own children were 17 years old, considerably more than earlier or later. Reflection on this example of a low period in the perceptions of these parents led to an examination of the other variables. Figures 1 and 2 graph factual and attitudinal variables for all parents. Represented here are only those parents who were rated at all time periods. Once again, using only those parents with complete data at all periods reduced the number of records available for analysis, so few of the variables could yield statistically significant differences in the repeated measures analyses of variance. Nevertheless, it is apparent from a visual inspection of Figures 1 and 2 that the time when their children were 17 years old represented a low period in the adult lives of many of these people. Seventeen of the variables were at their lowest point at the 17-year period. Five others seem to describe a continually rising perception

over time. None, with the possible exception of the rating of "stamina of the parent's mother," seems to drop at the time of the 40-year follow-up. It would have been interesting to be able to examine other, intermediate times in the lives of these people. Perhaps other longitudinal enquiries will be able to consider this finding further.

Once again, an examination of the reasons for this apparent nadir in perceptions must await the future. It may turn out to be the most important finding of this study. Many avenues of exploration suggest themselves immediately. It is known, for instance, that not only are some of the parents much more consistent over time than others, but also some of them tend to be "uppers," that is, their perceptions seem to get rosier over time, while others seem to be "downers." In addition, we have information about IQ and health, and information on those parents who have died since being interviewed in 1968-1969, as well as ratings of Life Satisfaction, Locus of Control, and ego ratings, all made in 1968 and 1969. Perhaps we will find differences between those parents whose oldest children were 17 and those who were immediately facing the "empty nest" period. Myriad questions come to mind.

Table 7 shows mean correlations for men and women at each of the time comparisons, as well as mean percentages for the same periods. It can be seen that there are remarkably few differences in these comparisons. The average correlations and the average percents are slightly but not signifcantly higher for the comparison E - S, which covered a span of 15-16 years, than they are for S - F, which reflects the passage of about 23 years, or for the longest period, E - F, which was 38 years.

In this group of healthy intelligent adults there is no decline in memory as events become more remote, at least when events occurring in their own lives are considered. It is not the case for this group of people that memory fades

in the later years. Of course, the mean age of this group was 68.8 at the last interview, which puts them in the category of young-old, not old-old. Perhaps the ten years which have now passed would make a considerable difference. I would like to find out.

Discussion

Since this is a very preliminary report, firm conclusions would be inappropriate. More questions have been raised by this examination than have been answered. Continuing analysis should produce further provocative questions. I hope some tentative answers will be forthcoming as well.

In the meantime, nothing reported here is in real disagreement with the findings of other investigators who were able to check the accuracy of their anamnestic data. There is considerable reassurance in this. It is reassuring as well to find that these people, who in the later stages of the investigation were considerably older than subjects of earlier studies, emphatically did not show an impaired quality in their retrospective reports. There is considerable consistency for all ages over all studies. For instance, the same low correlation between IQ or education and consistency of reports has been found elsewhere (Block, 1969; Pyles, Stolz & Macfarlane, 1935; Squire & Slater, 1975). It was possible to find the higher than usual correlation for factual variables with IQ in this study because so many rather straightforward factual questions were available here.

Yarrow, Campbell & Burton (1970) reported an average correlation for attitudinal variables of .29, whereas the Guidance Study women averaged .37, a small difference. The factual variables available to Yarrow, et al., yielded an average correlation of .42, whereas the Guidance Study women averaged .87. Yarrow's "facts" were not of the same order as these: events could not be

defined as well, and the saliency at the later time of events such as thumb sucking and the height of the child during the nursery school years would be low indeed compared to some of the factual variables of the present study, such as age of marriage, amount of education, and so on.

One important difference was found between Yarrow's study and this one. She found considerable directional shift, significant in more than one half of the variables, when comparing mothers' recollections with the base line data. The Guidance Study parents, on the other hand, were not as likely to change their reports in such a systematic way. Significant shifts for four of the 44 factual comparisons were found for the women; these were "father's education," "parent's age at marriage" (two time periods), and "spouse's age at marriage." Only one factual variable shifted in this way for the men: "spouse's age at marriage." Six of the 47 attitudinal comparisons showed a significant directional shift, and these were, for the women: "mother relationship," "mother's stamina," "happy childhood" (three time periods), and "parent raise child as parent was raised." Three of the attitudinal comparisons for the men, "social adjustment at E," "social adjustment at S," and "happy childhood," showed a significant directional shift. These findings are more in line with those of Wenar & Coulter (1962) who found that change was in the positive direction slightly more than half the time.

Pyles, Stolz & Macfarlane (1935), whose study included the same women as the present study, found a mean percent agreement of 32.6 and a mean correlation of .80 for five factual variables. These women, answering a much larger number of questions later in their lives, did not decrease in their ability to agree with their own earlier reports. The passage of nearly forty years had not diminished their memories of their past lives.

The changes found in perceptions of childhood bring to mind the emphasis placed on early recollections by Adler (1931):

> "Among all psychic expressions, some of the most revealing are the individual's memories....There are no 'chance memories'; out of the incalculable number of impressions which meet an individual, he chooses to remember only those which he feels, however darkly, to have a bearing on his situation...Memories can never run counter to the style of life...In so far as his style of life alters, his memories also will alter; he will remember different incidents, or he will put a different interpretation on the incidents he remembers." (p. 73-74)

It is intriguing to consider this important idea of Adler's, that the early recollections are a function of the present state of mind of the person, almost a projective test of his psychological health, rather than a true reflection of the objective past. Does this mean that these elderly people are, as a whole, more psychologically healthy than they were 20 to 40 years earlier? Is the 17-year nadir indicative of a general malaise of spirit typical of parents of teenagers of that time? And if so, might we find a similar low point for a new generation of parents, other cohorts? These questions cannot be answered by the present data, but it is hoped that other studies will be able to pursue them, for surely they are of importance to our understanding of the life course.

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Table 1

Interrater Reliabilities

	Seventeen-Year Factual	Seventeen-Year Attitudinal	Forty-Year Factual	Forty-Year Attitudinal
Percent of all variables with complete agreement between raters	23%	(a) 0%	25%	(b)0%
Variables with some disagreement:				
Percent of all disagreements in which the only difference was that one rater decided there was not sufficient information but the other rater made a judgement	62%	45%	35%	40.5%
Occasions in which raters were one-step different in ratings (c)	35%	39%	(d)58%	54%
Occasions in which raters were two-steps different in ratings	(e) 3%	15%	(f) 5%	4%
Occasions in which raters were three- or four-steps different in ratings	0	1%	2%	1.5%

(a) 6% of the attitudinal variables of the seventeen-year interview differed only in whether raters felt the information was sufficient to make a judgement.
(b) 4% of the attitudinal variables of the forty-year interview differed only in whether raters felt the information was sufficient to make a judgement.
(c) In almost all cases, the ratings were of five points.
(d) One variable, "Father's occupation", accounted for 23% of of these occasions.
(e) "Change of health", "bond with child at S", and "relationship with child at S" accounted for 80% of these occasions.
(f) "social adjustment at S" accounted for 67% of these occasions.

Table 2

Factual Variables

Correlations Between All Time Periods

		Men			Women		
		E-S	S-F	E-F	E-S	S-F	E-F
Family of Origin:	Parent's birthplace	-	-	-	-	-	-
	Parent's position	.98	.97	.99	.86	.77	.76
	In what church raised	.53	.56	.26	.79	.89	.66
	Father's birthplace	-	-	-	-	-	-
	Mother's birthplace	-	-	-	-	-	-
	Father's education	.85	.60	.95	.96	.97	.75
	Mother's education	.81	.70	.97	.85	.82	.50
	Father's occupation	-	.74	-	-	.71	-
	Mother's occupation	-	-	-	-	-	-
	Father year death	-	-	-	-	-	-
	Mother year death	-	-	-	-	-	-
	Did parents separate	-	1.00	-	-	.88	-
Married Life:	Parent's age marriage	.98	.99	.97	.98	.97	.94
	Spouse's age marriage	-	-	.97	-	.99	.95
	Spouse's birthplace	-	-	-	-	-	-
Occupation, Finance:	Education of parent	.88	.89	.91	.94	.94	.90
	Education of spouse	.93	.93	.93	.92	.90	.84
	Parent's occupation at E (excluding housewives)	-	.92	-	-	-	-
	Parent's occupation at S (excluding housewives)	-	.83	-	-	.74	-
	Spouse's occupation at E	-	-	-	-	.88	-
	Spouse's occupation at S	-	-	-	-	.82	-
Children, Family:	Number of children	1.00	1.00	1.00	1.00	1.00	1.00
	Number of boys	1.00	-	-	1.00	-	-
	Number of girls	1.00	-	-	1.00	-	-

Table 3

Attitudinal Variables

Correlations Between All Time Periods

		Men			Women		
		E-S	S-F	E-F	E-S	S-F	E-F
Family of Origin:	Mother bond	-	.54	-	-.02	.24	-.05
	Mother relationship	.46	.60	-	.50	.43	.34
	Mother change relationship	-	-	-	-	-.34	-
	Mother stamina	.56	-	-	.18	.33	.69
	Father bond	.53	.37	-	.46	.14	.28
	Father relationship	.61	.29	-	.67	.61	.15
	Father change relationship	-	-	-	-	.15	-
	Father stamina	-	-	-	.22	.57	1.00
	Marital adjustment parents	-	-	-	.69	.97	-
	Parents intellectual	-	-	-	.62	.54	.77
Married Life:	Marital adjustment at E	-	-	-	.21	-	-
Occupation, Finance:	Finances at E	-	.34	-	-	.39	-
	Rating of finance	-	.38	-	-	.38	-
	Spouse involvement with work	-	-	-	-	.81	-
Personality:	Social adjustment at E	-	.54	.80	.21	.26	.53
	Social adjustment at S	-	.52	-	-	.03	-
Childhood, Family:	Bond with child at E	-	-	-	.15	-	-
	Relationship with child at E	-	-	-	.05	-	-
	Bond with child at S	-	.28	-	-	.53	-
	Relationship with child at S	-	.07	-	-	.48	-
	Parent raise child as was raised	-	-.11	-	-	.02	-
	Want college for child	-	.44	-	-	.43	-
	Other goals	-	.40	-	-	.28	-

			E-S	S-F	E-F	E-73	S-73	F-73
Happy Childhood:	Rating of happiness	Men:	.74	.34	.16	.14	.93	.84
		Women:	.41	.40	.13	.16	.37	.35

Table 4

Number of Spontaneous Mentions of these Aspects of Differences in Childrearing Between the Parent's Childhood and that of the Parent's Children

Interview	Independence	Opportunity	Golden Rule
17-year	42	34	31
40-year	11	5	2

Table 5

Parents' Report of Happiness of Own Childhood

N = 60	Ratings made in 1930	1946	1968	1973
Generally happy	17 (35.4%)	23 (42.6%)	30 (51.7%)	35 (85.4%)
Mixed	21 (43.8%)	16 (29.6%)	23 (39.7%)	4 (9.8%)
Generally unhappy	10 (20.8%)	15 (27.8%)	5 (8.6%)	2 (4.8%)
Missing ratings	12	6	2	19

Table 6

Happy Childhood Reports
of Only those Parents who Answered at all Four Times

N = 30	Ratings made in 1930	1946	1968	1973
Generally happy	12 (40.0%)	12 (40.0%)	17 (56.7%)	25 (83.3%)
Mixed	14 (46.7%)	8 (26.7%)	9 (30.0%)	3 (10.0%)
Generally unhappy	4 (13.3%)	10 (33.3%)	4 (13.3%)	2 (6.7%)

Table 7

Mean Correlations and Mean Percents

for all Time Comparisons

	E - S	S - F	E - F	Total
Women				
Factual correlations	.932	.877	.811	.871
Attitudinal correlations	.329	.360	.478	.377
Factual percents	75.3	65.0	67.3	68.8
Attitudinal percents	34.2	47.1	45.8	43.7
Men				
Factual correlations	.898	.856	.883	.878
Attitudinal correlations	.449	.580	.357	.480
Factual percents	76.5	71.3	67.3	72.3
Attitudinal percents	38.0	33.7	20.0	35.9

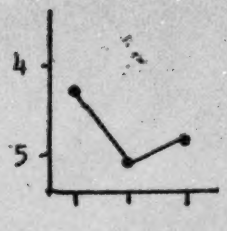
Figure 1

Total Mean Scores for Each Variable

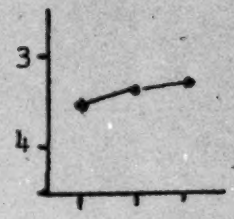
at All Three Time Periods

Factual Variables

Father's Education
N = 13
NS



Parent's Education
N = 34
NS



Mother's Education
N = 12
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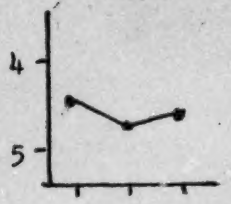
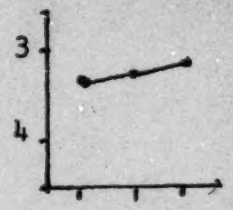
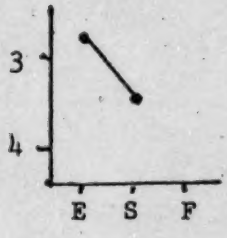


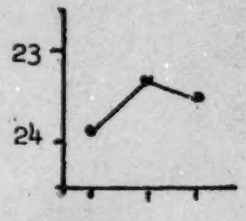
Spouse's Education
N = 22
NS



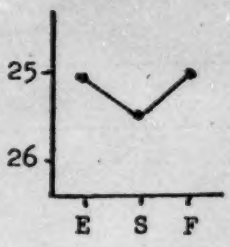
Father's Occupation
N = 39
$p < .04$



Parent's Age at Marriage
N = 34
$p < .001$



Spouse's Age at Marriage
N = 7
NS



Note: Only those parents are included in these Figures who could be rated on the variable at all relevant time periods.

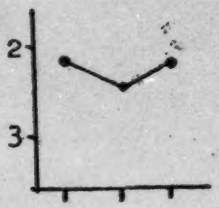
Figure 2

Total Mean Scores for Each Variable

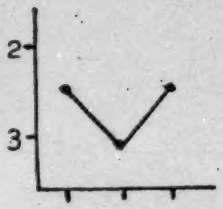
at all Three Time Periods

Attitudinal Variables

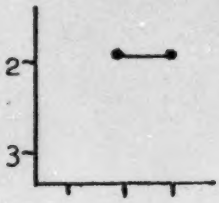
Bond with Mother
N = 20
NS



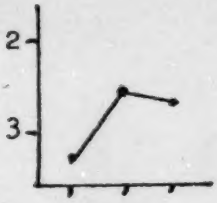
Relationship with Mother
N = 18
p < .023



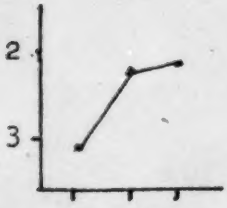
Change in relationship with Mother
N = 24
NS



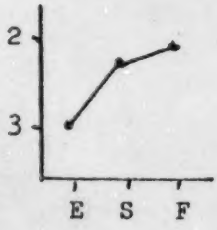
Mother's Stamina
N = 12
NS



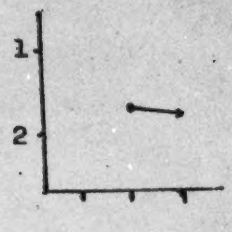
Bond with Father
N = 16
p < .012



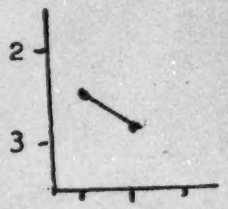
Relationship with Father
N = 19
p < .006



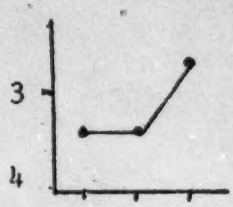
Change in Relationship with Father
N = 12
NS



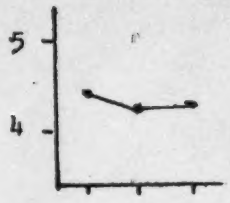
Father's Stamina
N = 15
NS



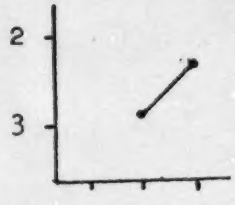
Marital adjustment of Parent's parents
N = 4
NS



Intellectual atmosphere of Parent's childhood home N = 4
NS



Financial Strain at E
N = 28
p < .07



Overall Rating of Financial Strain
N = 47
NS

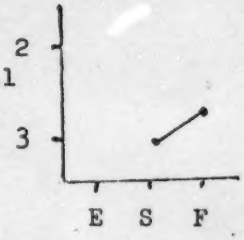
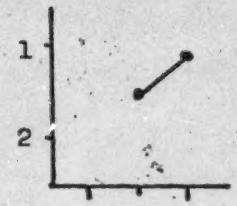


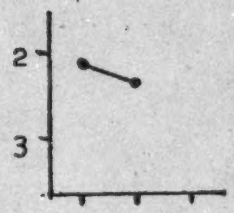
Figure 2

Page 2: Attitudinal Variables

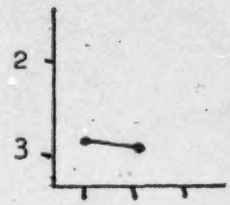
Involvement of Spouse in Work at S
N = 17
NS



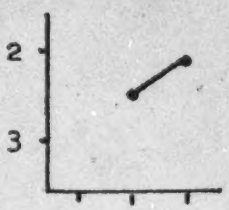
Parent's Relationship with Child at E
N = 19
NS



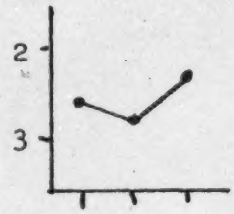
Marital Adjustment of Parent at E
N = 12
NS



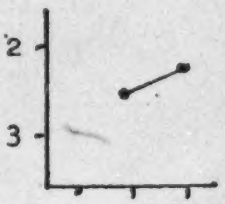
Parent's Bond with Child at S N = 37
p < .025



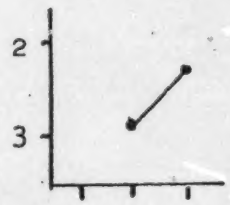
Social Adjustment of Parent at E
N = 14
NS



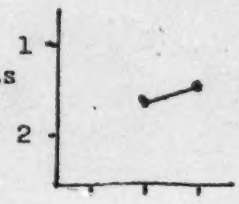
Parent's Relationship with Child at S
N = 42
NS



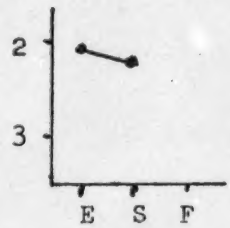
Social Adjustment of Parent at S
N = 38
p < .05



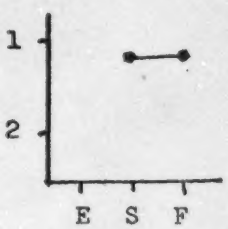
Did you raise your Child as you were raised?
N = 44
NS



Parent's Bond with Child at E
N = 19



Did you want College for Child?
N = 53
NS



Happiness of Childhood
N = 30
p < .0002